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Corporate Governance Mechanisms and Their Impact on Managerial Value.

Del Brio, Esther B.
Maia-Ramires, Elida
Universidad de Salamanca.

ABSTRACT: Previous studies have cast doubts on the effectiveness of the application of corporate governance codes in Continental-European countries, due to their Anglo-Saxon orientation. For this reason, we chose a Continental-European country with an Anglo-Saxon orientated code, such as Spain, and analyse which of the recommendations proposed in the Spanish Olivencia Code have positive effects on the value of the firm. We furthermore use panel data estimation to analyse this relationship as well as the impact on firm's value of other corporate governance related variables, such as the quality of audit reports, the magnitude of directors remuneration, the reporting on director remuneration or the firm size. Results suggest a positive relationship between the variables of execution of good corporate governance practices and the value of the company. There is also evidence that the more transparent the company is and the more favourable audit reports they obtain, the better both the managerial performance and the firm's value. Among the recommendations, it is found that the most relevant aspects are transparency and the quality of the audit report.

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KEYWORDS: corporate governance code, compliance, director remuneration, panel data.

Dpto. Administración y Economía de la Empresa
Campus Miguel de Unamuno.
37007. Salamanca. (Spain)
Fax: + 34 923 294715
e-mail: ebrio@usal.es
e-mail: a147653@usal.es

1. INTRODUCTION

The ongoing debate on corporate governance and codes of good practices or corporate governance codes (hereafter, CGC) has been shown to be crucial in the current study of the economics of firms. Both academics and professionals agree on the need for improving corporate governance by better protecting minority shareholders and increasing firms' transparency and reliance. In this sense, regulation issues affect the evolution of the firm more than ever, since the voluntary publication of information on corporate governance practices has not succeeded in many countries. In fact, the collapses of Enron, Parmalat, Royal Ahold and Polly Peck made it clear that firms should undergo further modifications to survive and protect their shareholders' interests. Moreover, the situation has worsened since the traditional managerial model based on family businesses is rapidly changing towards a concept of a firm more accessible to investors of all kinds. Among the proposed modifications, we may highlight change in the pattern of ownership structure (non-executive officers, institutional investors,...), portfolio diversification, but also improvement in the flexibility of adaptation to global markets and an increase in institutional investment in international markets as well as the evolution of new technologies which enable a faster dissemination of innovation. In this scenario, Mallin, Mullineux and Wihlborg (2005) consider that only through codes of good practice is it possible to increase confidence in managers, which, in conjunction with a favourable economic panorama, creates a very attractive atmosphere for shareholders.

Some of these modifications are contained in the spirit of most of the CGC which in the last instance are to encourage public firms -where shareholders delegate the management of the firm to the hands of external managers (Matos and Coelho, 2003)- to provide more information on the "ethics" of the business and the transparency of the management. But obviously the next step was to check that the fulfilment of the CGC recommendations effectively enhances both shareholder value and social utility. The current paper advances in this field, by investigating how the CGC recommendations and several firm characteristics related to corporate governance affect a firm's value, as measured by the Tobin's q ratio.

On the other hand, previous studies have also cast doubts on the effectiveness of the application of CGC in European countries, since sometimes they provoke new inefficiencies owing to the lack of suitability of Anglo-Saxon orientated codes to Continental-European firms. In most cases, the inefficiencies come from the fact that regulatory mechanisms such as the CGC are not required in every single firm structure, but only in those ones where the agent-owner

conflict is patent. Neither family businesses nor a large proportion of small businesses will profit from these kinds of practices. Furthermore, since artificial corporate governance mechanisms, such as CGC, are not usually compulsory, they do not always work properly. For this reason, we chose a Continental-European country with a Anglo-Saxon orientated CGC, such as Spain, and analyse which of the recommendations proposed in the Spanish CGC, the Olivencia Code, have positive effects on the value of the firm. Considering which of these recommendations are more Anglo-Saxon orientated and which are more suitable for the Spanish firm, we shed more light on the topic.

Consequently, the current study contributes to the investigation on corporate governance by using the panel data methodology to measure the relationship between firm value and the degree of compliance with the 23 Olivencia Code recommendations as well as other corporate governance related variables (auditing, directors' remuneration and transparency, among others). To proxy the degree of compliance with the Olivencia Code, we analyse the good governance reports submitted by Spanish firms to the Spanish supervisory stock exchange commission (CNMV) from 1999 to 2001. Furthermore, we provide new empirical evidence for a European stock market where the existing literature is still scarce.

The results suggest a positive relation between the variables of execution of good corporate governance practices and the value of the company. There is also evidence that the more transparent the company is and the more favourable audit reports they obtain, the better the managerial performance and the firm's value. Among the recommendations, it is found that the most relevant aspects are transparency and the quality of the audit report, relationships that are corroborated by both multivariate analysis techniques and panel data models.

The current paper is structured as follows. Section 2 revises the state of the art, focusing specifically on the Spanish context. Section 3 describes the data and methodology and Section 4 empirically analyses the suitability of the Olivencia code for Spanish firms while Section 5 presents the model to be tested. Results are shown in Section 6, and Section 7 expounds the main conclusions.

2. REVISION OF PREVIOUS RESEARCH.

When in 1992 the Cadbury Report was issued in an attempt to supervise and enhance managerial behaviour, it brought to light the need for reducing managers discretionality and for turning back to those times and firm structures where the protection of the shareholders was assured. The Cadbury Report represented the first CGC, and from this pioneer experience, many other initiatives followed: France, Holland, Germany, Australia, Belgium, Canada, Portugal, Brazil and the United States are examples of countries that already possess corporate governance regulations for listed companies. In all cases, the

codes are intended to enforce auditors' and analysts' independence, as well as to control both corporate officers and institutional investors versus minority shareholders, trying to harmonise the way of managing firms. Furthermore, they work on the improvement of transparency, focusing on aspects such as directors' remuneration, and protection against takeovers, thus increasing the confidence of shareholders in the managerial group.

The first attempt to produce a CGC in Spain generated the Olivencia code, issued in February 1998 as an initiative of the CNMV (National Supervisory Securities Exchange Commission). It basically contained 23 recommendations ranging from the regulation of the board structure to the behaviour of their members, which tried to ensure the minority shareholders' confidence in the firm's management and its transparency¹. However the lack of enforcement of this document as well as some weaknesses detected provoked the creation in September 2002 of a new commission. As a result, a tighter report, the Aldama Code (the current Spanish CGC), was released after January 2003. Seven years have passed since February 1998 and yet neither CGC seems to be broadly fulfilled by Spanish firms. The CNMV itself and its former presidents have remarked that only about 21% of firms fulfil this requirement; moreover, since this figure refers to the Olivencia code, it is expected to diminish when referring to the Aldama code, although it is still too early to speak of its application. Therefore, new voices have arisen demanding the use of CGC as a way of promoting responsibility and transparency in corporate governance. Otherwise, it would be difficult to ensure investors' confidence in the stock markets.

Apart from the efforts on the regulation side, the financial literature has worked hard during the last decade to define proper corporate governance mechanisms whose effects would noticeably affect firms' evolution, namely, a firm's value. In this sense, two approaches maybe highlighted: the study of the effects of CGC on a firm's value and the effects on a firm's value of a long list of factors related to control/agency factors, and managerial behaviour, which may determine the existence of healthy good corporate governance practices within the firm. Since the pioneer work of Berle and Means (1932) on the problems of the separation of ownership and control, different studies have focused on the relationship between corporate governance and the agency theory. Le Vigoureux (1997) analysed the true essence of corporate management and relates it to the decrease in the number of family businesses. Jensen (1993) studied corporate governance's mechanisms, while Jensen and Meckling (1976) mainly focused on the directors' participation in the ownership structure. The revision of those mechanisms around the different countries was analysed by Roe (1993) and, more recently, corporate scandals, such as the collapse of Enron in 2001 and the problems suffered by Parmalat in 2003 have once again brought this topic to the forefront.

Thus, new approaches to corporate governance highlight aspects such as the protection of minority shareholder (Shleifer and Vishny, 1997; Johnson, Boone, Breach and Friedman, 2000) and the increasing participation of institutional shareholders (Chaganti and Damanpour, 1991; Barnhart, Marr and Rosenstein, 1994) who are able to protect their rights more efficiently than individual shareholders. On the other hand, the demands for good corporate governance practices are increasing as new aspects of the organization of the firm become more relevant: capital sustainability, social corporate responsibility, increase in manpower skill and high technology (Rodríguez, 2003). Furthermore, in the stock market, where the access to information is easier and most agents demand better information on corporate governance, new conflicts may rise within the firm if the corporate governance is not efficient.

According to Evans, Evans and Loh (2002), although corporate governance has for years been considered an important aspect of corporate control, it has only been in recent years that the study has focused on organizational structures and their management (Drobetz, Schillhofer and Zimmermann, 2003; Lehmann and Weigand, 2002; Fernández, Gómez-Ansón and Cuervo, 2004). Among these studies we perceive a great diversity in the way the relationships are analysed, since research into corporate governance has identified a variety of mechanisms that assure that managers act in the shareholders' best interest. Among those mechanisms, the traditional distinction between internal and external mechanisms also applies. Among the internal mechanisms we may quote ownership concentration and managers' ownership (Chaganti and Damanpour, 1991; Barnhart and Rosenstein, 1998; Dahya, Lonie and Power, 1998), board composition (Bhagat and Black, 2002; Evans, Evans and Loh, 2002; Matos and Coelho, 2003), executive remuneration (Mehran, 1995 and Evans, Evans and Loh, 2002). Among the external ones, we have the level of debt financing (Kim and Stulz, 1988; Safieddine and Titman, 1999; González, 1997) and dividend distribution (Jensen, 1986).

One of the main internal control mechanisms is without trace of doubt, ownership concentration. However, its impact on the performance of the company has still not been clearly dilucidated. Shleifer and Vishny (1986) demonstrate that ownership concentration increases a firm's value, however, in Admati, Pfleiderer and Zechner (1994), this result is inverted due to the large shareholders' risk aversion. Bolton and Von Thadden (1998) do not obtain conclusive results on the relationship between ownership concentration and a firm's liquidity. Focusing on other roles of ownership concentration, Moerland (1995) insists on the role of ownership structure as the main differentiating characteristic among different financial systems.

An additional internal control mechanism is the composition of the board of directors, distinguishing between internal and external directors, as highlighted

in the embryonic research of Vance (1964) which produces a positive correlation between the proportion of internal directors and the measures of a firm's result. Klein (1998) provides evidence on the positive relationship between a firm's value and the representation of internal directors on the investment committee, while in his paper of 2000, he detects a significant negative correlation between a firm's value and the proportion of independent directors. Regarding external directors, Rosenstein and Wyatt (1990) confirm the hypothesis that external directors are chosen according to the shareholders' best interests. In turn, Baysinger and Butler (1985), Hermalin and Weisbach (1991) do not find any significant relationship between the composition of the board of directors and several measures of corporate governance. And, finally, Agrawal and Knoeber (1996) find a negative correlation between the proportion of external directors and the value of the company, measured by Tobin's q.

According to Mayer (1992) or Dahya, Lonie and Power (1998), it is the localization of the control rights rather than ownership concentration which determines the degree of intervention exercised by a firm's owners. In fact, Pound (1995) describes some of the situations discouraging small shareholders from exercising their rights, enabling managers to persist in their mistakes and negatively affect the firm's value. Therefore, many of the abovementioned studies have attempted to identify where the effective control is located, trying, as we do, to clarify how all these variables affect a firm's value.

The variety of papers increases when analysing corporate governance mechanisms around the world. In this study we have selected Spain, but many other places, apart from the USA and the UK, have also been analysed such as Australia (Evans, Evans and Loh, 2002), Germany (Lehann and Weigand, 2000) and some emerging markets (Gibson, 2003). For the Spanish case, we should first consider which mechanism is a priori deemed the most efficient. For instance, prior to Enron's collapse and the re-birthing of corporate governance codes, Shleifer and Vishny (1997) stated that German, Japanese and US firms would rather have bank control and institutional investors than artificial mechanisms, combining the presence of institutional investors with a regulatory system that better protects shareholders' rights. On the other hand, Continental European had not yet developed a proper corporate governance system, although they were mainly based on internal mechanisms such as ownership concentration and debt, which, in the last instance, are less effective since they lack the necessary legal protection.

Returning to the need to determine which is the most appropriate CGC for Spanish firms, so far there is a lack of empirical studies providing conclusive results. However, there is a long list of descriptive studies that have analysed different aspects of corporate governance. Navarro-Rubio (1998) analyses different corporate governance systems (distinguishing between a market based system and an internal mechanisms based system) and the factors that motivate

higher requirements of effective control, while Fernández and Gómez-Ansón (1999) analyse the differences between internal and external corporate governance systems. Also Recalde (2003) focuses on the differences detected between the Anglo-Saxon pattern and that required by Spanish firms. He concludes that the corporate governance requirements for European public firms are completely different from those of the US, and that the model of CGC should be adapted to each country's specifications. For instance, when we simply analyse ownership structure, while the three largest shareholders accumulate 20% of the capital in countries like the United States, in Spain, the proportion of widely held non financial firms capital is 25% (Faccio and Lang, 2002) and, as pointed out by Crespí (1998) the ownership concentration threshold is 10%. Spanish firms also differ when considering the percentage of independent directors, which for 2001 was only approximately 33% (the ratio raises to 37% for firms quoting in the Spanish index –Ibex35).

However, there is a constant in every code, regardless of other differences among countries: the control mechanisms, either internal or external, used in the majority of the countries are the same. Fernández, Gomez-Ansón and Fernández (1998) focus on these common aspects, analysing the influence on a firm's value of the composition and size of the board of directors, and the directors' ownership participation. Other aspects of corporate governance which have been also analysed for the Spanish context are the role of directors' remuneration (Ortín and Salas, 1997), ownership structure (Galve and Salas, 1993; Galve and Salas, 1996), and the positive aspects of the improvement in transparency and the fulfilling of good governance practices in Spanish firms (Olcese, Gascó, Martínez-Pardo, Bonet and Gómez-Ansón, 2004). However, as mentioned above, not many firms comply with these practices, and at first, it seems that the compliance with the code did not provoke an increase in the firm's ROI, although Fernández, Gómez-Ansón and Cuervo (2004) detected a positive market reaction to firms' announcements of their compliance with the Olivencia code when they involve a re-structuring of the board of directors; for partial compliance, the market only reacts positively for lower levered firms and firms with a high proportion of executive directors. Fernández y Gómez-Ansón (2003) work in the construction of a ratio of good corporate performance which also include the compliance with the Olivencia code, but non conclusive results are obtained yet, as far as we know.

3. DATA AND METHODOLOGY.

The main objective of this paper is mainly to explain how firm's value is affected by a group of variables which capture the effect of good governance practices in the Spanish company nowadays. However, the paper goes further in the study of the effects of the Olivencia code and its suitability for monitoring Spanish firms, in the light of previous criticisms based on the fact that corporate

governance requirements for Continental European public firms are extremely different from those of the Anglo-Saxon countries.

In this sense, we first analysed the recommendations contained in the Olivencia code, which has been classified as an Anglo-Saxon oriented code, and determine which of its 22 recommendations are more useful or more suitable to help minority shareholders to protect their interests and therefore improve corporate governance. Data on compliance with the Olivencia code by Spanish firms were obtained from the CNMV, which from 1999 to 2001 sent a questionnaire to all Spanish quoted firms demanding information of their compliance with each of the 23 recommendations contained in the Olivencia code. The answers to this questionnaire were easily obtained from the CNMV website. Since answering the questionnaire was voluntary, the degree of response was not high. In fact, for the 3 years, we have an initial sample of 145 firms, out of which 61 firms quoting in the Spanish continuous market, answer the questionnaire in 1999, 67 firms in 2000 and 59 companies in 2001. A distribution of firms by sectors is shown in Table 1. To determine which of these recommendations were best observed by Spanish firms and which affect a firm's value, multivariate analysis techniques were applied, namely discriminant and factor analyses.

Our second objective consisted of determining the effects of the most relevant recommendations, as well as other firm control-related factors, on a firm's value, in order to gauge whether the compliance with corporate governance mechanisms has been positive for Spanish firms since the application of the Olivencia code in 1998.

For this purpose, we have considered a period of study comprising two periods: a control period where the Olivencia code had not yet been issued (from 1996 to 1998), and a second period, from 1999 to 2002, years for which there are data available on the application of the Olivencia code and the degree of compliance with its recommendations. For this second analysis, we constructed a complete and balanced panel for 50 non-financial firms ranging from 1996 to 2001. Financial firms were dropped from the sample, as well as firms with incomplete or unreliable data. Financial data were obtained from the COMPUSTAT database.

We considered different panel data specifications to account for the data structure. The model to be tested is given in equation 1, the left hand side variable being the Tobin's q and X_{it} standing for the vector of either exogenous or predetermined variables.

$$y_{it} = X_{it}'\beta + u_{it} \quad \forall i = 1, \dots, N \text{ y } \forall t = 1, \dots, T \quad (1)$$

Under the presence of unobserved cross-sectional heterogeneity (η_i) the random variable, u_{it} , can be decomposed as shown in equation (2),

$$u_{it} = \eta_i + \varepsilon_{it} \quad \forall i = 1, \dots, N \text{ and } \forall t = 1, \dots, T \quad (2)$$

where ε_{it} is a white noise, thus fulfilling the following properties:

$$\begin{aligned} E[\varepsilon_{it}] &= 0 & \forall i = 1, \dots, N \text{ and } \forall t = 1, \dots, T \\ E[\varepsilon_{it}^2] &= \sigma_\varepsilon^2 & \forall i = 1, \dots, N \text{ and } \forall t = 1, \dots, T \\ E[\varepsilon_{it} \varepsilon_{js}] &= 0 & \forall i, j = 1, \dots, N \text{ and } \forall t, s = 1, \dots, T \text{ such that } i \neq j \text{ or } t \neq s. \end{aligned} \quad (3)$$

The impact of the individual characteristics of the firms on the behaviour of the overall model has been traditionally incorporated by two different perspectives labelled *Fixed Effects* and *Random Effects* models (hereafter FE and RE models, respectively). The former is motivated by the need of exploiting the panel data structure by controlling unobserved time-invariant heterogeneity, which is captured by different individual intercepts, η_i . It is well-known that the so-called Within-Group (WG) estimator provides consistent estimates for the parameters of the model (vector β) – see Arellano (2003) or Baltagi (2005) for further details.

On the other hand, the RE model is based on the possibility of separating out permanent from transitory components of data variation, which implies the consideration of random variables for the individual components (η_i) that must be uncorrelated to the transitory components (ε_{it}). Therefore the RE model needs the following additional assumptions:

$$\begin{aligned} E[\eta_i] &= 0 & \forall i = 1, \dots, N \\ E[\eta_i^2] &= \sigma_\eta^2 & \forall i = 1, \dots, N \\ E[\eta_i \eta_j] &= 0 & \forall i, j = 1, \dots, N \text{ such that } i \neq j \\ E[\eta_i \varepsilon_{jt}] &= 0 & \forall i, j = 1, \dots, N \text{ and } \forall t = 1, \dots, T. \end{aligned} \quad (4)$$

Even under such conditions, the disturbances of the resulting RE model are, however, serially correlated since $E[u_{it} u_{is}] = \sigma_\eta^2 \neq 0$ for all $t \neq s$ and, consequently, the OLS estimates are not efficient. Hence, the (Feasible) GLS must be used taking into account the variance and covariance matrix of the RE model disturbances vector. This methodology yields more efficient estimates but it requires a further assumption, since the regressors and the specific firm component must be uncorrelated, i.e. $E[x_{it} \eta_i] = 0 \quad \forall i = 1, \dots, N$. Otherwise, the consistency of the GLS estimator could be jeopardised and thus the WG estimator would be preferable since, despite not being efficient, it is always consistent. According to these ideas, Hausman's (1978) specification test may be used to compare a FE model versus a RE model. Under the null hypothesis of individual effects uncorrelated to the regressors, both estimators are consistent but, in terms of efficiency, the RE should be chosen. Alternatively, Breusch and Pagan's (1979) LR test for random effects can be also used.

The discussion on FE and RE models, however, is only valid in static models where all regressors are strictly exogenous. Nevertheless in many cases the specification of dynamic structures strongly recommended (e.g. to avoid possible autocorrelation or endogeneity problems), not even the WG is consistent. Moreover, calculating first differences to remove η_i component creates a negative correlation between the lagged dependent variable and the errors in the transformed equation. In that case, the first differenced equation could be estimated by instrumental variables (IV) or two-step-least squares (2SLS), since the lagged levels of the dependent variable, dated $t-s$ for s larger than the maximum lag of the dynamic structure of the model, are valid instruments. Arellano and Bond (1991) derived a Generalized Method of Moments (GMM) by optimally exploiting the moment conditions. This methodology assumes that there is no autocorrelation in ε_{it} , which must also be tested (m1 and m2 statistics for first and second order autocorrelation in the first difference residuals). Moreover the Sargan test of over-identifying restrictions for the dynamic panel data model must also be implemented to check the validity of the instruments.

4. THE SUITABILITY OF THE OLIVENCIA CODE FOR SPANISH FIRMS.

To determine the suitability of the Olivencia code, we analyse the degree of compliance with each recommendation in the Olivencia code and its explanatory power with regard to a firm's value. With this purpose we performed a discriminant analysis in order to determine the effects on a firm's value of each individual recommendation as well as their clustering. The dependent variable is a firm's value, proxied through the Tobin's Q which we defined, following Agrawal and Knoeber (1996) as shown in equation (5). As usually, Q values higher than one will be associated with higher firm values, and vice versa.

$$Tobin's\ q = \frac{market_value + debt}{book_value_of_assets} \quad (5)$$

As independent variables, we use each of the first 22 recommendations of the Olivencia code². To construct these variables, for each company answering the CNMV's questionnaire in the years 1999, 2000 and 2001, we assigned a value of 0, 1 or 2 to each recommendation, considering whether the firm has total compliance (2), partial compliance (1) or non compliance (0) with each recommendation. Therefore, a firm which totally complies with the 22 recommendations would obtain a maximum value of 44; while a firm which does not comply at all with any recommendation will take the value of 0. The distribution of firms by their level of compliance is plotted in Figure 1. Similarly, the sum of the weights obtained by each recommendation for the

whole group of firms is shown in Table 2, which also provides a hierarchical list of the most observed recommendations (column 2).

Prior to the discriminant analysis, we first performed a factor analysis in order to know which aggregation of the 22 recommendations could increase the significance of the model. Therefore, we considered the score attributed to each of the 22 recommendations from the 191 companies that answered the questionnaire from 1999 to 2001. Results were not very conclusive, since the only data aggregation obtained by SPSS explained a cumulated total variance of only 51%, as shown in Table 3. The aggregation consists of the following four factors: Factor 1 comprises recommendations 1 (board of director –BD–supervisory function), 5 (Reduction of concentrating power), 6 (BD Secretary), 7 (BD and Executive Committee transparency), 8 (Control Sub-Committees), 12 (BD Resigning Obligations), 13 (Directors age limit), 14 (Information request rights), 16 (Company's internal regulations), 17 (Major shareholders loyalty) and 20 (Audit Committee role). Factor 2 comprises recommendations 3 (Majority of non-executive directors), 4 (BD size), 9 (Information timing), 10 (BD efficiency) and 21 (external auditors independence); Factor 3 comprises recommendation 2 (Independent directors) and 18 (Transparency) and, finally, Factor 4 is formed by the set of recommendations 11 (BD re-election), 15 (Director remuneration policy), 19 (further auditing requirements) and 22 (Unqualified audit report).

Regarding the discriminant analysis, the results shown in Table 4 provide evidence of a significant relationship between a firm's value and recommendations 19, 20, 6, 5 and 16, which are mainly related to further auditing requirements, director remuneration policy and internal company regulations. For the validation of our results, Table 4 also displays the summary of the discriminant canonical functions, with a value of the canonical correlation of 0.522. We also display the Wilks' Lambda test, which measures the statistical significance of the discriminatory capacity of the function and which is significant in our study.

It is noteworthy that other significant recommendations, such as 5 and 16, are not among those most complied with by Spanish firms, which indicates the need for encouraging their compliance. However, there are also some recommendations which do not seem to be so determinant for a firm's welfare since they neither affect firm value nor do they seem to be well compliance with by Spanish firms (i.e., recommendations 7, 8 and 13, which have to do with a firm's control committee and the director's age limit). We may thus conclude that the Olivencia code also includes aspects which are not so suitable for Spanish firms. We thus recall Recalde-Castells (2003) when he indicates that European CGCs need to become more normative if they want to be more efficient.

In our point of view, Spanish companies still need to improve in the adoption of practices that attempt to enhance good practices in corporate governance.

5. EXPLAINING THE EFFECTS OF THE APPLICATION OF THE OLIVENCIA CODE ON A FIRM'S VALUE.

This section summarises the hypotheses tested and the variables used for that purposes. Although the main objective of the paper consist on measuring the impact of corporate governance mechanisms on managerial value, other interesting hypotheses, such as the effects of audit reports, a firm's transparency policy, directors' remuneration or a firm' size are also analysed.

HYPOTHESIS ONE: The greater the compliance with the CGC recommendations, the higher a firm's value.

According to Drobetz, Schillhofer and Zimmermann (2003), a direct relationship is expected between compliance with the CGC and a firm's value. The justification lies in the fact that investors do appreciate the reporting of information on compliance with a code that is requiring further corporate social responsibility. For this reason, we created a binary variable, GOV, which takes the value of 1 for firms that have answered the aforementioned questionnaire sent by the CNMV to Spanish firms, and 0 otherwise. Since the execution of CGC recommendations is not possible prior to 1999 (the code did not even exist), GOV also controls for the period of application (taking the value of 0 for years prior to 1999).

Authors such as Fernández, Gómez-Ansón and Cuervo (2004) have already analysed the market reaction to the announcement of compliance, finding positive results. However, we want to go further and analyse not only whether firms comply or not with the code, but also to what degree a firm is complying with the code. For this purpose, a qualitative variable, APLI was constructed as the sum of the weights attributed to each of the 22 recommendations for each firm and for each year in the sample. Since the attached weights range from 0 (for non-compliance) to 2 (for total compliance), the value which the variable APLI may take ranges from 0 to 44. We then constructed the interactive variable APLICGC (APLI*GOV) to better control for any possible change either in the intercept or the slope of the function.

HYPOTHESIS TWO: The more favourable the audit report, the higher a firm's value.

Dewing and Russel (2004) analyse the relationship of the audit report with the corporate governance regulation, pointing out that many cases of bad governance behaviour are related to unfavourable audit reports and lack of reliability of financial statements. Therefore, a *clean* audit report is expected to

denote a higher firm value. To proxy the quality of the audit report, we followed the COMPUSTAT classification that distinguishes 5 categories of audit reports: (0) unaudited, (1) unqualified, (2) qualified, (3) no opinion and (4) unqualified opinion but explanatory language has been added to the standard report. We thus construct a binary variable AUDI that takes value 1 for categories 1 and 4, and 0 otherwise.

HYPOTHESIS THREE: The greater the transparency, the higher a firm's value.

Following Drobetz, Schillhofer and Zimmermann (2003), a positive relationship is expected between transparency and a firm's value, because shareholders' confidence in managers increases along with the volume and quality of the available corporate information. The reason is that managers' discretionality diminishes when they are controlled by adequately informed investors. Since the recommendations of the CGC reinforced the improvement of transparency by recommending firms to report directors' remuneration, we thus constructed a dummy variable, TRANS, that takes value one for the firms that disclose directors' remuneration and 0 otherwise.

HYPOTHESIS FOUR: The higher the directors' compensation, the higher a firm's value.

Despite the big controversy regarding the agency theory and the quite common opportunistic behaviour on the part of firms directors (Evans, Evans and Loh, 2002), there exists evidence on the positive relationship between total shareholder returns and directors' goodwill, as denoted by Conyon, Peck and Sadler (2000). Therefore, we intend to test whether managers' compensation is not only a mechanism to ensure a firm's performance but also to ensure the effectiveness of managers behaviour by means of a good remuneration. In this sense, a higher compensation will bring better governance and consequently better results for a firm's shareholders (Ooghe and De Langhe, 2002). To proxy directors' compensation we considered the magnitude of their remuneration standardised by the volume of the firm's income. We thus constructed the variable REMDIR, which stands for the ratio of directors' emoluments to pretax income, where directors' emoluments comprise all fixed and variable remunerations paid to and on behalf of directors, as measured by Compustat item G419, and pretax income (Compustat item G635) represents net operating and non-operating income reported before appropriations to untaxed reserves, income taxes, minority interest and net and extraordinary items.

HYPOTHESIS FIVE: The bigger the firm, the smaller a firm's value.

A negative relationship is expected between firm size and its value due to the fact that directors of big firms not only pursue increasing the firm's value but also preserving their status and stability within the firm. According to Drobetz, Schillhofer and Zimmermann (2003) and Lehmann and Weigand (2000), the negative relationship between firm size and Tobin's q corroborates that, among the biggest firms, the smallest ones are those which care most for the shareholder and thus obtain better results than those firms whose directors' targets go beyond shareholders' satisfaction. To measure firm size we used the natural logarithm of total assets (Compustat item G107).

In order to test these hypotheses above, we proposed two different specifications (eqs. 6 and 7) of the panel data model described in Section 2 (see eqs. 1 to 4). The first model represents a static relation while the second one incorporates a simple dynamic structure to avoid for possible autocorrelation in the error term.

$$Q_{it} = \beta_0 + \beta_1 GOV_{it} + \beta_2 APLICGC_{it} + \beta_3 AUDI_{it} + \beta_4 TRANS_{it} + \beta_5 REMDIR + \beta_6 LSIZE_{it} + u_{it} \quad (6)$$

$$Q_{it} = \beta_0 + \beta_1 Q_{it-1} + \beta_2 GOV_{it} + \beta_3 APLICGC_{it} + \beta_4 AUDI_{it} + \beta_5 TRANS_{it} + \beta_6 REMDIR + \beta_7 LSIZE_{it} + u_{it} \quad (7)$$

where Q_{it} is a proxy for a firm's value, as shown in equation 5 above, and the independent variables follow the description shown in Table 5.

The subindex refers to the observations for each variable of company i in moment t , β_j represents the coefficients associated with each variable and u_{it} is the error term.

6. RESULTS

Table 6 displays the estimates and their corresponding t-statistics for the different panel data models. The linear restrictions test ($F_{49,292}$) confirms the need of exploiting the panel data structure to avoid cross-sectional heterogeneity biases. The first and second columns correspond to the static FE and RE models. According to the Hausman specification test and the Breusch-Pagan LM test both estimates are consistent but the RE model involves more efficient estimates. However, other panel data studies involving Tobin's q recommended the use of dynamic models – see Hayashi and Inoue (1991) or Blundell, Bond, Devereux and Schiantarelli (1992) – and, consequently, we also provide estimates for the model including the first lag of Tobin's q as an additional explanatory variable (column 3). The Arellano-Bond tests of first and second order autocorrelation in the differenced residuals (m1 and m2, respectively) give evidence in favour of the absence of misspecification when using the simplest dynamic structure. Such a model is estimated by the GMM-2SLS Arellano-Bond dynamic panel data estimator and for this specification the Sargan test of over-identifying restrictions was also computed confirming the validity of the instruments. Regarding the parameter estimates, the results of both the static and

dynamic specifications are quite similar, but the significance of the parameters obtained by the GMM-2SLS seems to increase due to the incorporation of a dynamic structure, which eliminates possible autocorrelation in the disturbances.

All these results support the need to observe new corporate governance practices in order to increase firm's value. Firms complying with the Olivencia code requirements (APLICGC), reporting unqualified audit reports (AUDI), providing a high director's remuneration (REMDIR), and smaller size (LSIZE) have had their value increased in the last few years. Reporting a firm's directors' remuneration (TRANS) is expected to be welcome by the stock market, although this effect is not clearly significant.

One of the most significant variables in the study is APLICGC, which is positive and highly significantly related to firm's value. Nevertheless the dummy variable capturing whether the firm complied with the Olivencia code or not (GOV) reflects a negative and significant relation to firm's (non-detected by Olcese, Gascó, Martínez-Pardo, Bonet and Gómez-Ansón, 2004). This finding implies a change in both the slope and the constant when describing the relationship between Tobin's q and the degree of compliance with the code. The impact of the variable on Tobin's q is captured by the APLICGC's slope and the negative value for GOV's parameter is required to improve data fit quality. In other words, it is the degree of compliance, rather than the mere publication of whether firms comply, which increases firm's value; and it happens despite the fact that the CNMV has not yet been able to control for the veracity of the communications about Olivencia code compliance. It seems that for the Spanish case, results do not corroborate Weir and Lang's (2001) results when they conclude that a strict compliance with CGC does not lead to improvements in firm's performance.

With respect to the other 4 hypotheses considered, the hypotheses two, four and five are confirmed by our results. In particular, AUDI is clearly positive and significant, which agrees with the results obtained by Drobetz, Shilfhofer and Zimmermann (2003) for the German market and represents very hopeful news after results obtained by Del Brío (1998) or Cabal (2000) concluding that the Spanish market reacts similarly to both qualified and unqualified audit reports. On the other hand, Tobin's q reacts negatively to LSIZE, but taking into account that among the 50 firms in our sample we find most of the biggest Spanish firms, this negative relationship indicates that the firms whose value has especially increased in the last years are the smallest among the biggest ones. The positive and significant effect of director's compensation on a firm's value is detected on the dynamic GMM regression because this estimation seem to be more efficient as we have already commented. Finally, the least significant variable is the dummy variable TRANS, that is, the fact that a firm reports its

directors' remuneration or not. The significance of this variable is weak, since the smaller p-value (obtained in the dynamic model) is 0.133.

7. CONCLUSIONS.

Previous studies have cast doubts on the effectiveness of the application of good corporate governance codes in European countries, since sometimes they provoke new inefficiencies owing to the lack of suitability of Anglo-Saxon orientated codes to Continental-European firms. For this reason, the current paper analyses the degree of compliance of Spanish firms with the Olivencia code (Spain being a Continental-European country with an Anglo-Saxon orientated CGC) and analyse which of its recommendations have positive effects on a firm's value. Furthermore, we contribute to the investigation on corporate governance by using the panel data methodology to measure the relationship between a firm's value and the degree of compliance with 22 Olivencia Code recommendations as well as other corporate governance related variables (auditing, directors remuneration, transparency and firm' size). Among the 22 Olivencia code recommendations, the most relevant aspects are transparency and the quality of the audit report, relationships that are partly corroborated by a multivariate analysis and the panel data estimates. In fact, the results suggest a positive relationship between the variables of execution of good corporate governance practices and the value of the firm. They also provide evidence on the fact that a firm's value increases as long as the audit reports receive favourable opinions, the higher the managers' compensation, the smaller the firm size and the more transparent the firm is.

The results of this research support the capability of the good corporate governance practices proposed by the CNMV to ensure better managerial results for the Spanish companies, despite their Anglo-Saxon orientation. The execution of these recommendations by Spanish firms leads to greater trust on the part of investors in stock markets and corporate governance, which is welcome after the increasing atmosphere of insecurity created after Enron and other firms collapsed. In our point of view, Spanish companies will continue to make headway in the adoption of practices pursuing improvement in the shareholder-manager relationship, since it may bring more wealth to shareholders as well as greater security and stability for executives.

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TABLE 1: NUMBER OF FIRMS BY SECTOR

	NUMBER OF FIRMS	PERCENTAGE	CUMULATED PERCENTAGE
TRADE AND OTHER SERVICES	10	20.0	20.0
CONSTRUCTION	8	16.0	36.0
CAPITAL ASSETS	9	18.0	54.0
INDUSTRIES OF TRANSFORMATION	10	20.0	74.0
TRANSPORTS AND COMMUNICATIONS	3	6.0	80.0
ENERGY	3	6.0	86.0
FINANCIAL SERVICES	7	14.0	100.0
TOTAL	50	100	

TABLE 2: OLIVENCIA CODE RECOMMENDATIONS COMPLIANCE

Recommendation Number	Punctuation Value
22	371
10	366
19	* 366
6	* 358
9	353
1	348
18	344
14	340
4	339
2	338
20	* 336
16	* 334
3	332
21	324
17	323
12	303
5	* 298
15	288
11	282
8	250
13	219
7	200

Data on compliance of each recommendation for 187 revised questionnaires. Column 1 shows the number of the recommendation ordered by its hierarchical position; Column 2 displays the sum of the weights attached to each recommendation: we assigned a value of 0, 1 or 2 to each recommendation, considering whether the firm has total compliance (2), partial compliance (1) or non-compliance (0). The maximum value that a recommendation can obtain is 374 (187 firms multiplied by 2- total compliance value-).

* Stars mean that the recommendation was significant at discriminant analysis.

TABLE 3: FACTOR ANALYSIS RESULTS.

COMPONENTS	SUM OF SQUARED SATURATIONS FROM THE EXTRACTION		
	TOTAL	VARIANCE %	CUMULATE %
1	5.145	23.388	23.388
2	2.756	12.527	35.914
3	1.742	7.920	43.834
4	1.705	7.750	51.585

We display the total explained variance for the 4 components, using principal components analysis as extracting method

TABLE 4: DISCRIMINANT ANALYSIS RESULTS.

INCLUDED/DROPPED VARIABLES ^{A,B,C}

STEP	VARIABLE INCLUDED	WILKS' LAMBDA							
		F				T-STAT.			
		T-STAT.	D.F. 1	D.F. 2	D.F. 3	T-STAT.	D.F. 1	D.F. 2	D.F. 3
1	REC 19	0.942	1	1	113.000	6.943	1	113.000	0.010
2	REC 20	0.876	2	1	113.000	7.922	2	112.000	0.001
3	REC 6	0.802	3	1	113.000	9.160	3	111.000	0.000
4	REC 5	0.766	4	1	113.000	8.328	4	110.000	0.000
5	REC 16	0.728	5	1	113.000	8.145	5	109.000	0.000
FunctionTest		WILKS' LAMBDA		CHI-squared		d.f.		p-value	
1		0.728		35.080		5		0.000	

At each step, the variable minimising the global Wilks' Lambda is included.

^A Maximum number of steps is 44

^B Minimum partial F to enter is 3.84

^C Maximum partial F to drop is 2.71

REC stands for recommendation; D.F. stands for degrees of freedom

TABLE 5: DESCRIPTION OF VARIABLES IN MODEL (1).

VARIABLE	PROXY	MEASUREMENT	EXPECTED RELATIONSHIP
A firm's value	Q: Tobin's q.	Ratio of market value of outstanding shares	Dependent variable.

Olivencia Code's Compliance	GOV: Measures if a firm accomplish or not the Olivencia's Code	plus debt to book value of assets. Dummy variable that takes the value of 1 for the companies that fulfil the Olivencia Code and 0 for that do not fulfill	Constant of two sub samples
Degree of compliance with the Olivencia Code.	APLICGC: Measures whether a firm complies with each of the 22 recommendations.	For each firm we cumulate the weights associated to each recommendation, considering the value of 0 for firms which do not apply the recommendation, 1 for partial application and 2 for total application.	Positive
Unqualified audit report.	AUDI: stands for the quality of a firm's audit report.	Dummy variable that takes the value of 1 for unqualified firms and 0 otherwise.	Positive.
Transparency policy.	TRANS: voluntary reporting of directors' emoluments.	dummy variable that takes the value of 1 for firms reporting on managers' remuneration and 0 otherwise.	Positive
Directors' compensation.	REMDIR: percentage of income perceived by directors as emoluments.	Ratio of directors' emoluments to pretax income.	Positive.
Directors' own interests.	LSIZE: Firm's size	Logarithm of total assets	Negative

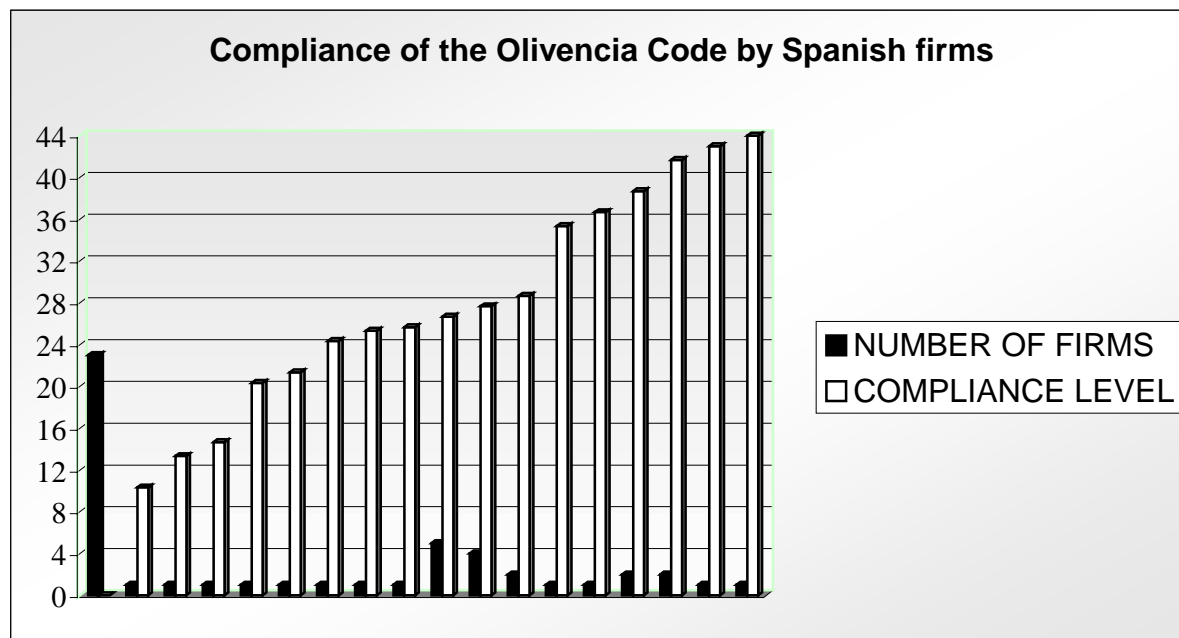
TABLE 6: PANEL DATA ESTIMATE.

	F.E. (WG)	MODEL R.E. (GLS)	MODEL DYNAMIC MODEL (GMM/2SLS)
Q (-1)			0.5685092 (23.72)
GOV	-0.1527422	-0.1814212	-0.4948696

	(-1.52)	(-1.97)	(-6.89)
APLICGC	0.0056227	0.00583	0.0031394
	(1.71)	(1.81)	(4.15)
AUDI	0.256263	0.2926235	0.1011337
	(1.94)	(2.33)	(2.67)
TRANS	-0.2190779	-0.1988961	0.0543459
	(-1.49)	(-1.40)	(1.50)
REMDIR	0.0028248	0.0016752	0.0018929
	(0.41)	(0.24)	(3.20)
LSIZE	-0.4288099	-0.3154186	-0.8947121
	(-1.74)	(-2.53)	(-4.62)
INTERCEPT	2.237325	1.98229	0.078064
	(3.32)	(5.14)	(3.99)
F (49,294)	8.17		
	[0.0000]		
HAUSMAN TEST		3.67	
		[0.7215]	
BREUSCH AND PAGAN		258.58	
LAGRANGIAN MULTIPLIER		[0.0000]	
TEST			
M1			-1.52
			[0.1273]
M2			0.62
			[0.5371]
SARGAN			10.81(14)
			[0.7012]

T Statistics in parentheses and P-values in brackets

FIGURE 1: CUMULATE SCORE OBTAINED BY SAMPLE FIRMS IN THEIR COMPLIANCE OF THE OLIVENCIA CODE RECOMMENDATIONS.



The white area represents the mean level of compliance of Spanish firms with the 22 recommendations of the Olivencia Code. The maximum mean value a firm can obtain is 44 (22 recommendations multiplied by 2 for total compliance). The black area represents the number of firms which obtained that level of compliance for the 3 years in the sample.

¹ An English version of these recommendations may be downloaded from the CNMV website.

² We do not include recommendation 23 into the analysis since it refers to the obligation of the firm to report its compliance with the CGC to the CNMV. All the firms in our sample have so reported to the CNMV at least one year in our sample period.